PCN85
THE ANALYSIS OF COSTS AND REIMBURSEMENTS FOR LUNG CANCER TREATMENT IN THE CZECH REPUBLIC
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OBJECTIVES: Lung cancer is the most frequently diagnosed oncologic disease worldwide, annually diagnosed in nearly 1.4 million patients. In 2010, the incidence in men was 89.7 per hundred thousand people (in 1996, it was 102.3), while in women 35.2 (against 22.9 in 1996). The severity of the disease is also reflected by the high mortality rate, which was 74.8 per hundred thousand people in men and 27.4 in women in 2010. **METHODS:** Identifying the costs spent by a clinic/hospital is difficult in the Czech Republic, as the majority of hospitals work with cost related data in the "confidential" mode. The costs were estimated and verified based on expert opinions of pulmonologists, oncologists, head physicians and staff members of technical and economic departments of five pneumo-oncologic centres and university hospitals in this study. **RESULTS:** Totally 32 procedures (process maps) were identified in lung cancer treatment (10 in diagnostic, 22 in therapeutic processes). Each procedure consists of diagnostics, therapy and subsequent monitoring of patients. Costs for respective steps were assessed, and total costs for each therapeutic scheme were calculated. **CONCLUSIONS:** The calculations imply that treatment costs significantly differ depending on the selected diagnostic/ therapeutic procedure. The setting of the reimbursement system generates different stimuli for providers who may reach both positive and negative balances. This fact may have an effect on economic results leading, in its consequence, to the preference of alternatives more suitable in terms of reimbursement regardless of the optimum procedures for a specific patient.

PCN86
TREATMENT PATTERNS AND COSTS ASSOCIATED WITH CHRONIC LYMPHOCYTIC LEUKEMIA CHEMOTHERAPY UNDER THE BRAZILIAN PRIVATE HEALTH CARE PERSPECTIVE: A RETROSPECTIVE ANALYSIS OF THE ORIZON DATABASE
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OBJECTIVES: To identify the chemotherapeutic treatment patterns and associated costs in patients with chronic lymphocytic leukemia (CLL) in the Private Healthcare System. **METHODS:** A retrospective analysis of the Orizon database, containing inpatient and outpatient claims data of a pool of 102 HMOs (34% of the total Private Health System), from January 2009 to December 2012 was conducted. Eligibility criteria were patients starting CLL (ICD-10 code C911) chemotherapy treatment from April 2009 to December 2012. This cohort of patients was followed until December 2012, death or loss of follow-up. Chemotherapy regimens were identified based on the agents reported in the claims. Line of treatment was defined based on meaningful interruption (>6 months) and/or change in the chemotherapy regimen. Descriptive statistics (average, standard deviation and percentage) of treatment regimens, duration of treatment and costs were performed. **RESULTS:** A total of 163 patients representing 859 cycles of chemotherapy met eligibility criteria; 43.6% of the patients underwent more than one line of treatment, with total chemotherapy costs of R$84,979.63 per patient. The three most widely used chemotherapy regimen were: fludarabine, cyclofosfamide and rituximab (FCR), used in 81 (54.9%) patients with average treatment duration of 3.54 cycles and total costs of R$69,241.91 per patient; rituximab monotherapy, used in 44 (27.0%) patients, with average treatment duration of 4.05 cycles and total costs of R$59,543.12 per patient; and fludarabine and cyclofosfamide (FC), used in 19 (11.7%) patients, with average duration of 2.22 cycles and total costs of R$7,075.95 per patient. Chemotherapy drugs accounted for 72.8% of the total costs, followed by other medicines (11%), disposable devices (5.5%) and hospital facility fees (5.0%). **CONCLUSIONS:** FCR is the standard of care in CLL patients treated in the Brazilian Private Health System, and almost half of the patients undergo more than one treatment line, creating a significant financial burden to private payers.

PCN87
COST OF CANCER IN THE AUSTRIAN HOSPITAL SETTING
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OBJECTIVES: In Austria, 38,000 people are yearly diagnosed with cancer, which is the world's leading cause of death (Austria: 19,547), followed by heart disease and stroke. Advances in early detection, prevention and treatment have led to decreasing cancer death and more favorable outcomes. Moreover, significant increases in the cost of cancer care have come in parallel with these advances. The cost factor related to modern cancer treatment is increasingly a matter of debate. Hence, the aim of the analysis was to evaluate the cost of cancer expressed as reimbursed lump-sums of the DRG system, number of inpatients stays and Length-of-Stay (LOS) in the inpatient setting to bring more transparency in the discussion and bridge the information-gap. **METHODS:** We performed a retrospective claim-based analysis with Austrian DRG-System (LKF Leistungsorientierte Krankenanstaltenfinanzierung) data. The DRG-System is based on ICD-10 codes. Payment consists of one or several case-based lump-sums. Our analysis included all cancer hospital admissions. The cost-evaluation is based on the refunded lump-sums of the DRG-System for the year 2011. **RESULTS:** In 2011, 353,883 inpatient stays with a diagnosis of cancer were monitored. Hospital stays due to cancer accounts for 14% of the entire inpatient stays in Austria. The average LOS in cancer patients was 4.35 days and was associated with average costs per stay of 3,730 Euros. Compared with the total number of admissions these numbers are below average (LOS: 5.43; costs per stay: 3,949 Euros). Furthermore, cancer patients received medical services to the value of 927 million Euro or 14.2% of total reimbursed lump-sums (6.53 billion Euros) in Austria. 224 million Euros fall upon medical tumour therapy. With regard to monoclonal antibody therapies, 56 million Euros was refunded. **CONCLUSIONS:** The current development in modern cancer therapies leads to efficient treatment pathways expressed in higher survival rates, reduced hospital days and an improved quality-of-life.

PCN88
COST-ANALYSIS IN THE TREATMENT OF PATIENTS AFFECTED BY MALIGNANT ASCITES IN ITALY
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OBJECTIVES: The objective of this project was to identify the treatment cost of malignant ascites from the Italian NHS perspective through a cost-analysis. Three reference centers in Italy contributed to this study during year 2012. **METHODS:** Three centers (Scientific Institute of Romagna for Cancer Studies and Treatment-I.R.S.T; Medical Oncology Unit of San Gerardo Hospital; Department of Gynecology of University Hospital Agostino Gemelli) were chosen due to the fact that they treat a representative sample of patients with malignant ascites in Italy. Each center was asked to complete three case report forms: the first identifying the costs for the pre-procedure diagnostic tests, the second identifying the specific procedure costs (paracentesis) and the third identifying the specific costs due to treatment of complications. All these reports had to be completed for the last 5 patients diagnosed with malignant ascites in order to prevent selection bias. A total cost for each patient was calculated by DRG analysis (standard cost – tariff). The DRG analysis assessed: day hospital, admission number, hospitalization, number of hospitalization days, principal diagnosis, main procedure/intervention, number of paracentesis procedures performed on the same patient with the same diagnosis, DRG type, DRG code, refund value for day hospital/ refund value for ordinary hospitalization. **RESULTS:** The analysis shows an average cost of € 1,464.42 per patient with malignant ascites using the DRG reimbursement rate (minimum value: €1,405.63; maximum value: €1,525.37). Analysis using DRG with complications resulted in a mean value of €1,524.84 (minimum value: €1,429.69; maximum value: €1,625.55). The key cost driver of malignant ascites treatment was the paracentesis procedure. **CONCLUSIONS:** The economic impact of paracenteses is high, especially when procedures must be repeated. The reduction in the number of paracenteses could reduce the costs while improving the QoL of the patients.

PCN89
ECONOMIC EVALUATION OF AN ELECTRICAL IMPEDANCE SPECTROSCOPY (EIS) DEVICE USED AS AN ADJUNCT TO COLPOSCOPY
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OBJECTIVES: Colposcopy is an essential part of the screening process for the prevention of cervical cancer by diagnosing and treating precancerous lesions known as cervical intra-epithelial neoplasia (CIN). The objective of this study was to assess the cost and health impact of using an electrical impedance spectroscopy (EIS) device to aid in the diagnosis of precancerous lesions compared to standard colposcopy. A threshold for the EIS device that resulted in a similar sensitivity and higher specificity than standard colposcopy was used. **METHODS:** Two models to assess the cost and health impacts were developed; a short term model representing the initial colposcopy treatment pathway and a longer term Markov model that included colposcopy follow-up. Sensitivity and specificity of colposcopy were derived from the EpiCIN trial of the EIS device. Two referral thresholds were defined in the analysis, the threshold for 'See and Treat' on colposcopic impression alone (CI) and a lower threshold for referral for biopsy to determine disease presence (DP) prior to treatment. Costs of colposcopy were estimated using data from Sheffield Teaching Hospitals. Different colposcopy clinic scenarios were modelled to represent the different ways colposcopy clinics manage patients. Health related quality of life (HRQoL) decrements were applied for colposcopy, biopsy and treatment. One-way sensitivity analyses were also conducted. **RESULTS:** The analysis suggests that the use of the EIS device can result in fewer biopsies being taken, a reduction in over-treatment with an associated small improvement in HRQoL, and a lower colposcopy cost per woman with CIN2+ treated for some colposcopy clinic scenarios. The results are sensitive to changes in colposcopy costs. **CONCLUSIONS:** The use of the EIS device with a higher specificity and similar sensitivity to standard colposcopy has the potential to lead to a reduction in the colposcopy cost per woman with CIN2+ treated for some clinic scenarios.

PCN90
ESTIMATION OF THE EPIDEMIOLOGICAL AND ECONOMIC IMPACT OF THE QUADRIVALENT HPV VACCINATION IN GIRLS AND BOYS IN SPAIN
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OBJECTIVES: To estimate the epidemiological and economic benefits of a quadrivalent HPV vaccination in girls and boys compared with vaccination only in girls in Spain. **METHODS:** A population-based compartmental dynamic transmission model of HPV developed in the US was partially adapted to the Spanish setting updating epidemiological data of HPV related diseases, the vaccination coverage and direct costs of the diseases. The analysis was performed from the National Health System (NHS) perspective. The strategy of cervix cancer screening (CCS) and vaccination of only girls from 11 to 26 years (S1) was compared to CCS and vaccination of girls and boys from 11 to 26 years (S2) with the quadrivalent vaccine. Assuming the duration of protection against vaccine HPV types is lifetime, the results over a 100-year time horizon, were estimated applying a discount of 3% on costs. In order